

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in light of the following remarks, is respectfully requested.

Claims 10-31 are currently pending, and Claim 26 is amended.

Claim 26 is amended to address a minor informality, which requires no further search and consideration. Thus, the changes to the claims add no new matter.

The outstanding Official Action objected to Claim 26; rejected Claims 20-31 under 35 U.S.C. U.S.C. § 112, first paragraph; rejected Claims 10-14, 17, 23, 26, and 29 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent Application Publication No. 2002/0181422 to Parantainen et al. (hereinafter “Parantainen”), U.S. Patent Application Publication No. 2002/0178250 to Haartsen, and U.S. Patent Application Publication No. 2004/0219917 to Love et al. (hereinafter “Love”); rejected Claims 15, 16, 18 and 19 under 35 U.S.C. § 103(a) as unpatentable over Parantainen, Haartsen, Love, and MPEP 2144.03; rejected Claims 21, 24, 27 and 30 under 35 U.S.C. § 103(a) as unpatentable over Parantainen, Haartsen, Love, and U.S. Patent No. 5,870,380 to Diehl et al. (hereinafter “Diehl”); and rejected Claims 22, 25, 28 and 31 under 35 U.S.C. § 103(a) as unpatentable over Parantainen, Haartsen, Love, and U.S. Patent Application Publication No. 2003/0007466 to Chen.

Applicants submit that Claim 26 as amended overcomes the objection to Claim 26. Accordingly, Applicants respectfully request that the objection to Claim 26 be withdrawn.

Applicants respectfully traverse the rejection of the claims under 35 U.S.C. § 112, first paragraph.

As a preliminary matter, it is noted that MPEP § 2163.02 provides that

Whenever the issue arises, the fundamental factual inquiry is whether the specification conveys ***with reasonable clarity to those skilled in the art*** that, as of the filing date sought, applicant

was in possession of the invention as now claimed. See, e.g., *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991). (Emphasis added)

The subject matter of the claim ***need not be described literally*** (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the written description requirement.

That is, compliance with the written description requirement does not require the specification to “***clearly recite or indicate***” a claimed feature as apparently asserted by the Office Action.

In this regard, paragraph 24 of Applicants’ specification discloses:

On the other hand, the base station selects a terminal to which transmission permission is given, based on the information received as the transmission request signal, based on predicted channel quality upon data transmission from each terminal, and based on an allowable interference level upon reception thereof at the base station. Then, ***the base station returns an assignment signal as a response to the transmission request signal*** to the terminal (step S2). At this time, the base station reports the ***maximum number of bits to be transmitted*** which are selectable by the terminal, i.e., ***a transmission rate (Rate)*** and ***a transmission permitted time (Time)*** indicating a period during which data can be transmitted, to the terminal.

Applicants submit that in view of at least paragraph 24 of Applicants’ specification, one of ordinary skill in the art would understand that the terms “resource represents a transmission permitted time during which data can be transmitted,” “resource represents a maximum number of bits which is permitted for the terminal,” and “resource represents a transmission rate at which data is transmitted” have support in the written description.

Thus, Applicants respectfully request that the rejection of Claims 20-31 under 35 U.S.C. § 112, first paragraph, be withdrawn.

Applicants respectfully traverse the rejection of the claims under 35 U.S.C. § 103(a).

Claim 10 is directed to a communication method for a communication system including a base station and a terminal, where the terminal transmits a data as a new data to the base station, and upon receiving an NAK signal indicating a reception failure from the base station

as a response to the transmission of the new data, the data as a retransmission data is transmitted to the base station. The method recites, *inter alia*:

a third step
for the terminal to transmit a new data to the base station based on the value of the resource for data transmission; and
a fourth step
for the terminal, to autonomously transmit a retransmission data to the base station without sending a transmission request to the base station for a resource to transmit the retransmission data, in case the new data is transmitted to the base station at the third step and ***the NAK signal is received from the base station as a response to the new data.***

Now turning to the applied reference, Parantainen describes a method and arrangement for transferring information in a general packet radio service (GPRS) system. Figure 4 of Parantainen illustrates downlink communication between a base station and a mobile station. Parantainen describes that upon initiation of a connection between the base station and the mobile station, data is transmitted on a downlink channel between the base station and mobile station ***along with information on the uplink channel to be used for acknowledgements and other signaling.***¹ Parantainen further describes that if a previously transferred packet data was not successfully received by the mobile station, the base station gets this information through the ***acknowledgement message sent from the mobile terminal*** and will then retransmit the data.²

Claim 10 is distinguishable over Parantainen as the applied reference fails to disclose or suggest a NAK signal that “is received from the base station as a response to the new data.” Parantainen merely describes that time slots may be dedicated in an uplink TDMA frame for the uplink packet data transmitted from the mobile station to the base station of Parantainen. As discussed above with respect to Figure 4 of Parantainen, the uplink data sent from the mobile station to the base station are ***acknowledgement signals or signaling*** related to control

¹ See Parantainen at paragraphs [0066] to [0068] and Figure 4.

² See Parantainen at paragraph [0068].

information.³ Parantainen neither discloses nor suggest that a NAK signal is transmitted from the base station of Parantainen in response to the acknowledgement signals control information transmitted from the mobile station of Parantainen. Accordingly, Parantainen fails to disclose or suggest that a “NAK signal is received from the base station as a response to the new data,” as recited in Claim 1.

Further, Applicants submit that since ACK and NAK signals are not transmitted from in response to another ACK signal or transmitted control signaling, there is no reason for the base station of Parantainen to transmit a NAK signal in response to the ACK signal or control signaling transmitted from the mobile station of Parantainen. That is, there is ***no reason*** to combine Parantainen with any other reference to modify the mobile station of Parantainen “to ***autonomously transmit a retransmission data to the base station*** without sending a transmission request to the base station for a resource to transmit the retransmission data, in case the new data is transmitted to the base station at the third step and ***the NAK signal is received from the base station as a response to the new data***,” as recited in Claim 1. (Emphasis added). In this regard, “rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, ***there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.***” *KSR, Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006))(emphasis added).

Additionally, Applicants submit that Parantainen and Love teach away from autonomously transmitting “a retransmission data to the base station without sending a transmission request to the base station for a resource to transmit the retransmission data, in case the new data is transmitted to the base station at the third step and the NAK signal is received from the base station as a response to the new data,” as recited in Claim 1. A *prima*

³ See Parantainen at Figure 4.

facie case of obviousness may also be rebutted by showing that the art, in any material respect, teaches away from the claimed invention. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997).

As discussed above, the mobile terminal of Parantainen transmits an acknowledgment signal or a control signal to the base station of Parantainen using information on the uplink channel such as allocating a time slot. Accordingly, the mobile station of Parantainen requires at least information on a time slot to transmit the ACK or control signal to the base station. Thus, the transmission of data from the mobile station to the base station as described in Parantainen is ***non-autonomous***.

Further, Love discloses that:

the timing of uplink transmissions in an environment supporting MS-***autonomous scheduling*** (whereby a MS may transmit whenever the MS has data in its transmit buffer and all MSs are slowed to transmit as needed) by the individual MSs ***can be quite sporadic and/or random in nature.***⁴ (Emphasis added)
In this regard, Love describes that when using autonomous scheduling and the traffic volume is high, the likelihood of data collisions increases, where radio resources are diminished to support the increase amount of transmissions. Accordingly, Love discloses that “explicit scheduling (whereby a MS is directed by the network when to transmit) by a scheduling controller can be beneficial.”

Thus, since Parantainen only describes non-autonomous transmission of data (i.e., assigning a time slot) from the mobile terminal to the base station of Parantainen, and Love describes that explicit scheduling is preferred since autonomous scheduling can lead to data collisions, one of ordinary skill in the art in view of Parantainen and Love would be discouraged from combining these applied references “to ***autonomously transmit a retransmission data to the base station without sending a transmission request to the base station for a resource*** to transmit the retransmission data, in case the new data is transmitted to

⁴ See Love at Paragraph [0009].

the base station at the third step and the NAK signal is received from the base station as a response to the new data,” as recited in Claim 1.

Accordingly, Applicants submit that the combination of Haartsen and Love with Parantainen is improper and does not present a *prima facie* case of obviousness for Claim 10. Applicants have considered Diehl and Chen and submit that these applied references fail to cure the deficiencies of Parantainen, Haartsen and Love. Accordingly, Parantainen, Haartsen, and Love in combination with Diehl and/or Chen does not present a *prima facie* case of obviousness for Claim 10. Applicants respectfully request that the rejection of Claim 10, and claims depending therefrom, under 35 U.S.C. § 103(a) be withdrawn.

As Claims 11-13 recite features analogous to Claim 10, Applicants submit that the combination of Parantainen with Haartsen and Love is improper and does not present a *prima facie* case of obviousness. Thus, Applicants respectfully request that the rejection of Claims 11-13, and claims depending therefrom, under 35 U.S.C. § 103(a) be withdrawn.

Claim 14 recites that “the retransmission data is transmitted after a predetermined time defined between the terminal and the base station has elapsed since reception of the NAK signal.” The outstanding Official Action asserts that Paragraph 50 of Haartsen discloses these features. However, this cited portion of Haartsen merely describes an ARQ scheme where a recipient responds with an ACKNOWLEDGMENT (ACK) if the information was received correctly or with an NAK if it was not received correctly. Haartsen fails to disclose or suggest that data is retransmitted after “a predetermined time period,” as recited in Claim 14.

Applicants have considered Parantainen, Love, Diehl, and Chen, and submit that these applied references fail to cure the deficiencies of Haartsen. Accordingly, Applicants request that the rejection of Claim 14 under 35 U.S.C. § 103(a) be withdrawn on this independent ground.

As Claim 17 recites features analogous to Claim 14, Applicants submit that Haartsen, Parantainen, Love, Diehl, and Chen fail to disclose or suggest all the features of Parantainen.

Accordingly, Applicants respectfully request that the rejection of Claim 17 under 35 U.S.C. § 103(a) be withdrawn on this independent ground.

Consequently, in view of the present response, no further issues are believed to be outstanding. The present application is believed to be in condition for formal allowance. A Notice of Allowance is earnestly solicited.

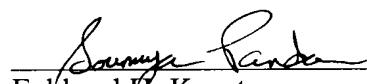
Respectfully submitted,

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